NATALIE HANSON

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EDUCATION

M.S. Mechanical Engineering – *Northwestern University* | Expected June 2021 | GPA: 4.0/4.0
B.S. Manufacturing and Design Engineering – *Northwestern University* | June 2020 | GPA: 3.6/4.0
Relevant Coursework: Quality Improvement by Experimental Design, Mechatronics, Rapid Prototyping, Stress Analysis, Human-Centered Product Design, Advanced Solid Modelling, Design for Manufacturing

WORK EXPERIENCE

Lead Mechanical Engineer – *InstaShield* | Palos Park, IL — June – Dec. 2020
- Created and filed over one hundred patent drawings, with final say on patent literature.
- Set up new suppliers with manufacturing standards and quality checks, with now over one-million products sold.
- Analyzed fulfillment and invoicing to manage product distribution and improve efficiencies.

TA for Human-Centered Design – *Northwestern University* | Evanston, IL — Sept. – Dec. 2020
- Advised students developing their own white-space projects on the engineering process and technical capabilities.

Mechanical Design Engineering Intern – *Beyond Design* | Chicago, IL — June – Aug. 2019
- Developed a range of low to high fidelity prototypes for clientele in varying project phases.
- Designed wireframe architecture, rendered sketch and CAD designs and performed competitive analysis of products.
- Conducted field-research and ran client brainstorm sessions.

Engineering Development Intern – *Myoko School* | Hanoi, Vietnam — June – Aug. 2018
- Designed and ran a project to install sound-absorption boards in classrooms.
- Lowered classroom noise by 10 decibels while staying under half of the allotted budget.
- Reached hundreds of community members and raised over 3 mill VND via marketing videos and a 3 day fundraiser.

SELECT PROJECTS

Manufacturing Engineering Design | Evanston, IL — March – June 2020
- Developed and enhanced the manufacturing process for fabrication of the Bionic Wrench.
- Optimized lead time and mfg. cost of parts based on tolerancing, value streams and statistical analysis.
- Designed a custom fixture plate for the manufacturing process.

Computer-Integrated Manufacturing | Evanston, IL — Jan. – March 2020
- Used geometric dimensioning and tolerances to create a two-part injection-molded velociraptor from a child's drawing.
- CNC'ed beautiful aluminum molds with venting for injection molding using NX CAD design and CAM programming.
- Solved plastic defects created from the manufacturing process to optimize parts for mass-production.

Furniture Design Studio | Copenhagen, Denmark — Aug. – Dec. 2019
- Designed and built sustainable flat-pack furniture in Copenhagen, Denmark under the study of a renowned Danish architect.

Engineering Capstone Project – *Raitong Organics* | Sisaket, Thailand — Jan. – June 2019
- Developed a virtual-fencing system for cattle to prevent vehicular accidents in Thailand.
- Lead as Project Manager, and contributed to the electronics, communication architecture and manufacturing.
- Considered community, environment, sustainability, and manufacturability in design development.

TECHNICAL SKILLS

SolidWorks, NX 11, ANSYS, Inventor, Rapid Prototyping, C, HTML and CSS, Adobe Creative Suite, Autodesk Sketchbook, Sketch

LEADERSHIP

Publicity Director – **Society of Women Engineers**
Aug 2016 – June 2020

Mechanical Team and Driver – **Solar Car Team**
Jan – June 2019

A-Team – **Club Tennis Team** | Aug 2016 – June 2020

AWARDS

Northwestern University Graduate Alumnae Fellow (2020 – Present)

MaDE Director's Award (Class of 2020)

National QuestBridge Scholar (2016-2020)